

Please amend the paragraph starting at page 55, line 2, to read as follows. A marked-up copy, showing the changes made thereto, is attached.

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The discrimination is made as to whether or not the above-described process (steps 41 to 45) has been carried out for all rows (step 46). By repeating the above-described the process for each of the rows of 8 pixels, the boundary correction process can be carried out for one line. The process for one line is carried out for each of the scans, by which the density non-uniformity occurring at the boundary between the adjacent scanning record areas, can be suppressed.

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IN THE CLAIMS:

Please amend the claims as follows. All claims currently pending in the application, including those not amended, are reproduced below. A marked-up copy of the amended claims, showing the changes made thereto, is attached.

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1. (Amended) An ink jet recording apparatus for effecting recording on a recording material by ejecting ink with relative scanning movement between a recording head and the recording material, said ink jet recording apparatus comprising:

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obtaining means for obtaining information indicative of an amount of ink to be ejected to each of a plurality of unit areas provided by dividing an area in the neighborhood of a boundary between adjacent bands of scanning recording of said recording head on the recording material; and

control means for controlling an amount of ink to be ejected to the unit areas on the basis of the output of said obtaining means,  
wherein the unit areas exist astride the boundary between adjacent ones of the bands.

2. (Amended) An ink jet recording method of effecting recording on a recording material by ejecting ink with relative scanning movement between a recording head and the recording material, said ink jet recording method comprising:

an obtaining step of obtaining information indicative of an amount of ink to be ejected to each of a plurality of unit areas provided by dividing an area in the neighborhood of a boundary between adjacent bands of scanning recording of the recording head on the recording material; and

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a control step of controlling an amount of ink to be ejected to the unit areas on the basis of the information obtained in said obtaining step,

wherein the unit areas exist astride the boundary between adjacent ones of the bands.

3. (Amended) A data processing method of processing data to be supplied to an ink jet recording apparatus for effecting recording on a recording material by ejecting ink with relative scanning movement between a recording head and the recording material, said data processing method comprising:

an obtaining step of obtaining information indicative of an amount of ink to

be ejected to each of a plurality of unit areas provided by dividing an area in the neighborhood of a boundary between adjacent bands of scanning recording of the recording head on the recording material; and

a control step of controlling an amount of ink to be ejected to the unit areas on the basis of the information obtained in said obtaining step,

wherein the unit areas exist astride the boundary between adjacent ones of the bands.

4. (Amended) An ink jet recording apparatus for effecting recording on a recording material by ejecting ink using a recording head having a plurality of recording elements, said ink jet recording apparatus comprising:

recording scanning means for effecting recording with relative scanning movement between the recording head and the recording material in a main scan direction;

sub-scanning means for imparting relative scanning movement between the recording material and the recording head in a direction which is different from the main scan direction substantially each time after completion of a recording scan in the main scan direction;

dot count means for counting an ink ejection data number for each of a plurality of unit areas provided by dividing an area in the neighborhood of a boundary between adjacent bands of scanning recording of said recording head on the recording material;

determining means for determining a thinning rate for each of the unit areas

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on the basis of an output of said dot count means; and

thinning means for effecting a thinning process to the ink ejection data on the basis of the thinning rate determined by said determining means,

wherein the unit areas exist astride the boundary between adjacent ones of the bands.

5. (Unchanged From Prior Version) An apparatus according to Claim 4, wherein said dot count means counts the ink ejection data number with weighting for each of the bands.

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- 6. (Unchanged From Prior Version) An ink jet recording apparatus according to Claim 4, wherein said dot count means counts the ink ejection data number with weighting which is different in the sub-scan direction.

7. (Unchanged From Prior Version) An apparatus according to Claim 4, wherein the recording head ejects a plurality of inks.

8. (Amended) An ink jet recording apparatus for effecting recording on a recording material with relative scanning movement between a recording head and the recording material, said ink jet recording apparatus comprising:

obtaining means for obtaining information indicative of an amount of ink to be ejected to each of a plurality of unit areas provided by dividing an area in the

neighborhood of a boundary between adjacent bands of scanning recording of said recording head on the recording material; and

control means for controlling an amount of the ink ejected to an area to be thinned in the unit areas on the basis of an output of said obtaining means,

wherein the sizes of the unit area and the area to be thinned are different from each other.

9. (Amended) An ink jet recording method of effecting recording on a recording material by ejecting ink with relative scanning movement between a recording head and the recording material, said ink jet recording method comprising:

an obtaining step of obtaining information indicative of an amount of ink to be ejected to each of a plurality of unit areas provided by dividing an area in the neighborhood of a boundary between adjacent bands of scanning recording of the recording head on the recording material; and

a control step of controlling an amount of the ink ejected to an area to be thinned in the unit areas on the basis of an output of said obtaining step,

wherein the sizes of the unit area and the area to be thinned are different from each other.

10. (Amended) A data processing method of processing data to be supplied to an ink jet recording apparatus for effecting recording on a recording material by ejecting ink with relative scanning movement between a recording head and the recording material,

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said data processing method comprising:

an obtaining step of obtaining information indicative of an amount of ink to be ejected to each of a plurality of unit areas provided by dividing an area in the neighborhood of a boundary between adjacent bands of scanning recording of the recording head on the recording material; and

a control step of controlling an amount of the ink ejected to an area to be thinned in the unit areas on the basis of an output of said obtaining step,

wherein the sizes of the unit area and the area to be thinned are different from each other.

11. (Amended) An ink jet recording apparatus for effecting recording on a recording material by ejecting ink using a recording head having a plurality of recording elements, said ink jet recording apparatus comprising:

recording scanning means for effecting recording with relative scanning movement between the recording head and the recording material in a main scan direction;

sub-scanning means for imparting relative scanning movement between the recording material and the recording head in a direction which is different from the main scan direction substantially each time after completion of recording scan in the main scan direction;

dot count means for counting an ink ejection data number for each of a plurality of unit areas provided by dividing an area in the neighborhood of a boundary between adjacent bands of scanning recording of said recording head on the recording

material;

determining means for determining a thinning rate for each of the unit areas on the basis of an output of said dot count means; and

thinning means for effecting a thinning process to the ink ejection data for an area to be thinned in the unit area on the basis of a thinning rate determined by said determining means,

wherein the sizes of the unit area and the area to be thinned are different from each other.

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12. (Amended) An apparatus according to Claim 11, wherein said thinning area is divided into a plurality of areas for each of which the thinning rate is determined, and said thinning means effects the thinning process on the basis of the thinning rate determined for each of the thinning areas.

13. (Unchanged From Prior Version) An apparatus according to Claim 11, wherein said determining means determines the thinning rate in accordance with the output of said dot count means and a distance from the boundary.

14. (Unchanged From Prior Version) An apparatus according to Claim 11, wherein the unit areas exist astride the boundary between adjacent one of the bands.

15. (Unchanged From Prior Version) An apparatus according to Claim 14, wherein the area to be thinned is set only in one of the adjacent bands.

16. (Unchanged From Prior Version) An apparatus according to Claim 14, wherein the area to be thinned is set only in one of the bands adjacent a sheet discharging side.

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17. (Amended) An ink jet recording apparatus for effecting recording by ejecting ink onto a recording material on the basis of data using a recording head for ejecting the ink through a plurality of nozzles, said ink jet recording apparatus comprising:

recording control means for imparting relative movement between said recording head and the recording material and ejecting ink from said recording head in accordance with ink ejection image data to sequentially effecting recording operations for adjacent recording areas by the ink ejected from the recording head; and

correcting means for counting data indicative of ejection of the ink for boundary areas of adjacent recording areas and reducing the ejection data for the boundary areas.

18. (Amended) An apparatus according to Claim 17, wherein said correcting means counts the data for a line of pixels corresponding to each of the nozzles of the recording head effecting the recording for the boundary areas.



19. (Amended) An ink jet recording method according to Claim 2, wherein an amount of the reduction is predetermined, and wherein an error between the predetermined amount and an actually reduced amount is added to an amount to be reduced for another line of pixels.

20. (Unchanged From Prior Version) An apparatus according to Claim 17, wherein said recording head ejects by a pressure of a bubble generated by thermal energy.

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21. (Amended) A method of correcting image data for an ink jet recording apparatus for effecting recording by ejecting ink onto a recording material on the basis of data using a recording head for ejecting the ink through a plurality of nozzles, the ink jet recording apparatus imparting relative movement between the recording head and the recording material and ejecting ink from the recording head in accordance with ink ejection image data to sequentially effecting recording operations for adjacent recording areas by the ink ejected from the recording head, said method comprising the step of:

correcting the ink ejection data by counting data indicative of ejection of the ink for boundary areas of adjacent recording areas and reducing the ejection data for the boundary areas.

22. (Amended) A method of correcting image data according to Claim 21, wherein said counting step counts the data for a line of pixels corresponding to each of the nozzles of the recording head effecting the recording for the boundary areas.